

Report on consumption of veterinary antibiotics in Ireland during 2013.

INTRODUCTION

This report details the fifth annual survey conducted by the HPRA on the usage of veterinary antibiotics. This survey was conducted in conjunction with the European Surveillance of Veterinary Antimicrobial Consumption (ESVAC) project, a European Commission initiative coordinated by the European Medicines Agency (EMA).

As noted in the previous reports, the consumption data provided in this report should be interpreted with caution; annual consumption figures may be affected by the precise timing of end of year sales, some veterinary medicines might be exported for use outside the State, and there might occasionally be inaccuracies in the voluntary declarations made in good faith by marketing authorisation holders. Indeed, during the preparation of this year's report an inaccuracy involving one product was discovered in the data entry which had gone unnoticed in previous years. This had the effect of overstating the actual usage in previous years by between 2.8 to 3.8 tonnes in each year. Although significant in its own right, the HPRA believes this should not detract from the general trends observed.

1.1 Methodology

Companies marketing veterinary antibiotics in Ireland were requested to submit annual returns for quantities of individual presentations of product supplied in the State during 2013. The data to be provided were described in a format prescribed by the ESVAC protocol (www.ema.europa.eu). Data were collected from a total of 52 individual antibiotic substances contained in over 800 product presentations which have been authorised for use in Ireland (including both medicines authorised nationally by the HPRA as well as those authorised centrally by the EU Commission). The data are based on self-declarations by applicant companies and have not been subject to independent verification or audit. It should be noted that certain other veterinary antibiotics (e.g. those authorised under special licence by the Department of Agriculture, Food and the Marine) or human antibiotics which might be prescribed or used by veterinary practitioners where there is no suitable veterinary alternative authorised were not included in this analysis. However, the contribution from these sources is likely to be very small.

The data were collated by the HPRA and reviewed for discrepancies before being sent to the EMA for validation and entry into the ESVAC database. This harmonised approach is followed in each of the European Member States. In conformity with ESVAC protocol, the analysis of the data in respect of individual substances of the same antibiotic classes have been grouped together and classified under the appropriate class headings. In this report the headings are as follows: penicillins, amphenicols, tetracyclines, fluoroquinolones, aminoglycosides, macrolides, lincosamides, sulphonamides & trimethoprim (TMP), cephalosporins and other classes.

1.2 Results

The total tonnage of veterinary antibiotics used in Ireland is 100.2 tonnes in 2013. These results are broken down by chemical classes supplied into the market in Figure 1 and by dose form in Figure 2 below:

Figure 1. Distribution of sales (based on tonnes sold) of veterinary antibiotics supplied in 2013 in Ireland.

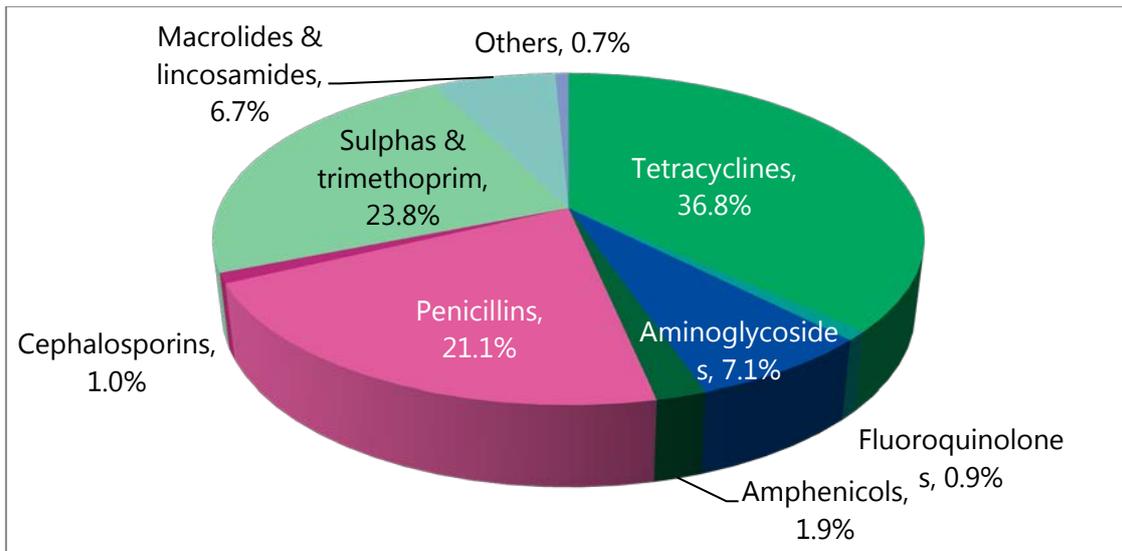
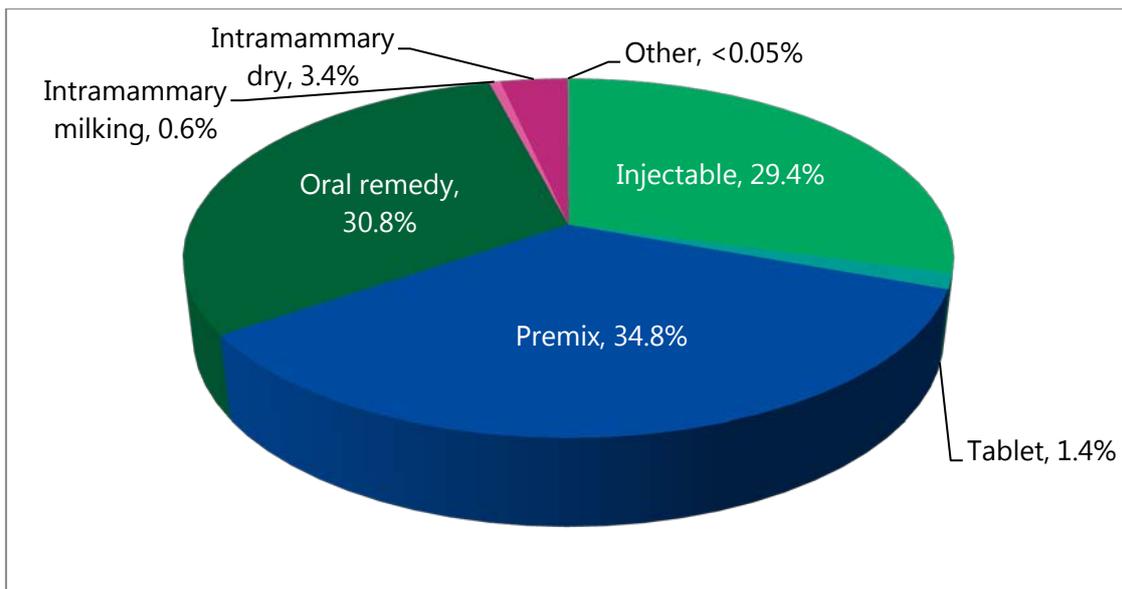


Figure 2. Pharmaceutical form breakdown of veterinary antibiotics sold in 2013 in Ireland.



1.3 Discussion

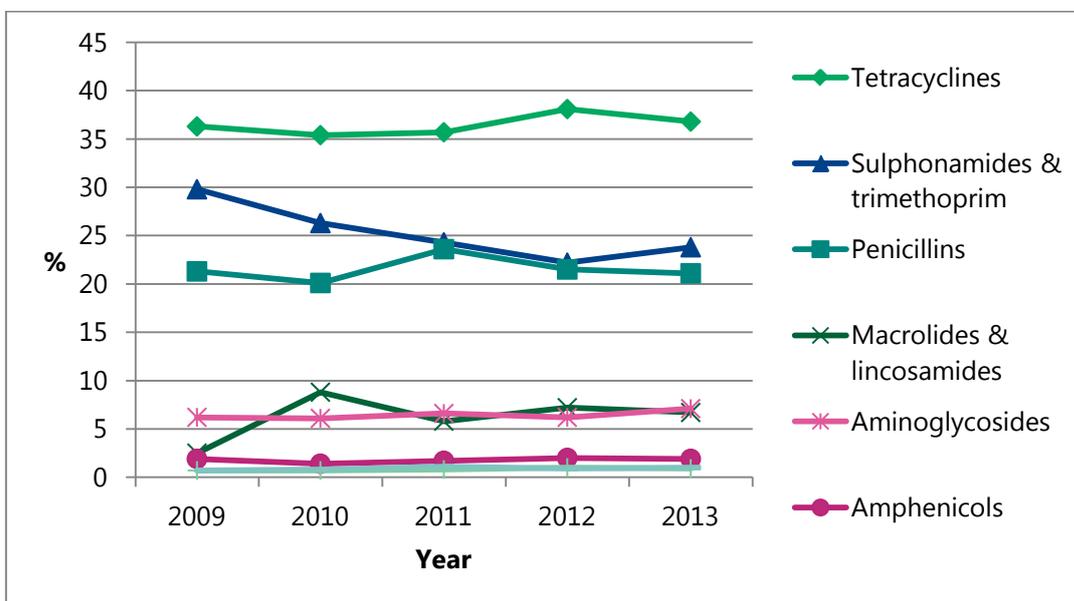
The total sales of veterinary antibiotics for the period 2009 – 2013 are reported in Table 1. The available data indicate an increase in antibiotic sales for the year 2013 compared with previous years. Whether this is due to seasonal factors, an increase in animal numbers bred in Ireland or a true increase in individual animal consumption in the market place is unclear.

TABLE 1. Sales (tonnes sold) of veterinary antibiotics for the years 2009 – 2013*	2009	2010	2011	2012	2013
	Tonnes sold	88.3	93.9	85.2	97.4

*The sales figures for 2009-2012 have been adjusted to correct for an inaccuracy which resulted in over reporting of the tonnage sold during this period.

A similar trend in the proportion of antibiotic sales for the different classes for the period 2009 – 2013 can be seen in the Graph 1 below.

Graph 1. Proportional sales (% , based on tonnes sold) of veterinary antibiotics for the years 2009 - 2013



Tetracyclines, penicillins and sulphonamides/trimethoprim again accounted for the highest proportion of antibiotic sales. It should be noted that the dose required of each antibiotic class to treat an animal can vary significantly. For example it can require up to 70 times more tetracycline to treat a disease in an individual animal when compared to treatment with a fluoroquinolone (new classes of antibiotic tend to be more potent on a per kg basis). Animal demographics will also influence the quantity required with different animal species requiring different dosing patterns.

With regard to the proportion of pharmaceutical forms supplied during 2013, the proportions are similar to those of previous years. Premixes continued to dominate the usage in Ireland accounting for 34.8% of all antibiotic sales. This was followed by oral remedies at 30.8%, consisting of oral powders, pastes and solutions. Injectable antibiotics accounted for 29.4% of sales. These three groups accounted for 95% of all antibiotic sales.

All antibiotic products carry label/package leaflet warnings relating to the responsible use of antibiotics; those considered critically important contain additional precautionary phrases so as to highlight the fact that they should only be used when necessary, usually following precise diagnosis using confirmatory diagnostic tests. All veterinary antibiotics are subject to veterinary prescription control, meaning that they require the prescription of a veterinary practitioner before they can be used.

CONCLUSION

Even if slightly increased compared to previous years, the overall pattern of antibiotic sales for 2013 shows a similar pattern compared with previous years. As in previous years large fluctuations in the sales of some individual products were observed, however, when compared with historical data this may be attributed to market volatility.

The HPRA is continuing to collect antibiotic sales data for Ireland as part of a broader European surveillance initiative, itself being an initiative to inform risk-management strategies to fight antibiotic resistance. Work is underway by ESVAC to develop a methodology to refine the data based on the different target species, daily dose and duration of treatment. This is expected to help in identifying the areas where antibiotic usage can be refined and risk-management measures can be targeted.

HPRA
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